

Spring 5-1-2013

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Recommended Citation

Dorris, Alana, "Participatory Approaches to Purchasing Decisions within the Healthcare System" (2013). *Honors Scholar Theses*. 315.
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Participatory Approaches to Purchasing Decisions within the Healthcare System

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Spring 2013

Abstract

Previous research has acknowledged the need to address increasing healthcare prices and offered specific approaches to addressing this problem. Researchers have felt emboldened to take the stance that some models of healthcare are superior to others when making purchasing decisions. The problem is that past research does not integrate all these aspects of healthcare in a comprehensive way for healthcare facilities. The main purpose of this study was to use sociotechnical and Macroergonomic principles to better understand purchasing policies and procedures at a large hospital. It specifically looked for opportunities to expand a large hospital's purchasing model through more interactive, participatory approaches. The study was largely descriptive and involved systems analysis through an extensive literature review and through interviews conducted with the Procurement Department employees at a large hospital in the Northeast. The study hypothesized (H1), that most purchasing is done through GPOs rather than through manufacturers directly, and that GPOs are cost effective but impede innovation. It also hypothesized (H2), that this hospital, representative of the current healthcare purchasing process at most hospitals, has limitations to the amount of end-user participation in the purchasing decision process. Results were consistent with both hypotheses. Notably, purchasing processes described in the literature are very different from actual purchasing processes at the hospital used for data collection. Recommendations are made for increasing participatory involvement of all stakeholders in the purchasing process: buyers, employees in hospital departments, physicians, and patients.

Participatory Approaches to Purchasing Decisions within the Healthcare System

Healthcare costs continue to drastically increase, adversely impacting the U.S. economy and our national deficits. Hospital devices and supplies are some of the main drivers of increasing healthcare costs, and the recession has put further attention and emphasis on limiting health expenditures. In 2010, the two largest consumers of health care were hospital care, and physician and clinical services. With the government paying for such a great portion of total health costs, Congress has focused on curbing costs (O'Brien, Kumar, & Metersky, 2013). In fact, medical supplies are second in line to labor costs, for requiring the majority of hospital spendings, which is "Typically 30 percent to 35 percent of the overall budget" (Neil, 2005, p. 35). The state of the economic market only exacerbates supply costs, which already are "Growing at 23 percent annually according to the HMFA, Healthcare Financial Management Association" (Fuller, 2011, p. 10). Therefore, healthcare purchasing policies and procedures can be considered a target area of concern that may contribute to wasteful spending practices.

Past research has recommended specific techniques to cut wasteful spending, but no studies integrate all of these recommendations into one model for improving healthcare purchasing decisions. The literature has focused on cost cutting and increasing effectiveness of purchasing decisions, but less research delves into the areas of participatory ergonomics and the complexity of a hospital's organizational design, or Macroergonomics. All in all, to this day, "A major gap exists between ideal and actual purchasing practices" (Galvin & Delbanco, 2005, p. 3).

Looking into how hospitals purchase through Group Purchasing Organizations (GPOs), manufacturers, or both can help us understand typical interactions that occur in

an actual purchasing process. Group Purchasing Organizations began in the late 1880s and grew in the 1970s and 80s. Today there are over six hundred GPOs in the United States, with the two largest being Premier and Novation. In fact 72 percent of hospital purchases are made from GPOs and up to 96 to 98 percent of other organizations. Most of the hospitals using GPOs use more than two (Mukun & Cherney, 2008), each claiming to offer lower purchasing costs (Hu & Schwarz, 2011). Today's top seven GPOs control 85 percent of America's market share (Litan & Singer, 2010). The term can be interchangeable with 'joint procurement', 'cooperative purchasing-agreement ideas', and the most commonly used, 'distributors' (McWilliams, 2008). GPOs work on a large scale by aggregating their members' purchasing demands to make favorable contracts with wholesalers, another term for manufacturers. They are financed by vendor fees and not by the members themselves (McWilliams). A GPO works as an intermediary, charging buyers and manufacturers for using its services, and offering rebates and discounts to hospitals (Saha, Seidmann, & Tilson, 2010). Despite the high use of GPOs, there are strengths and weaknesses to negotiating a contract with one. For instance, GPOs operate under regimes related to volume commitment so committed volume GPOs have more purchasing power in the supply chain and can negotiate with the seller. The rebates that a member hospital receives are tied to the percent of total purchases that hospital makes through the GPO, rather than the quantity or dollar volume of purchases (Brock, 2003).

Some Weaknesses of GPOs vs. Manufacturers

GPO members receive rebates from GPOs based on their percentage of purchases made through the GPO's product line (Roark, 2005), leaving sellers at a disadvantage and stifling competition. For instance, GPOs increase the pressure on manufacturers' profit margins and lower the manufacturer's profit on sales to 19 percent (McWilliams).

Additionally, Leahey, in an interview with HPN, claims GPOs can lock out most of the marketplace with a sole-source contract (Betz & Leahey, 2003). In a Q and A with Healthcare Purchasing Newspaper, HPN asks, "Do you agree GPOs serve big suppliers to the disadvantage of small ones," and Leahey answers, "The GPO system serves to benefit the GPO system. When two GPOs have the power to lock out 70 percent of the marketplace with a sole-source contract, every manufacturer other than the incumbent is disadvantaged" (Betz & Leahey, p. 63). The increasing dominance of chains and big retailers, as well as the changing price structure of the prescriptive drug market, brings financial pressures to smaller vendors.

Not only have GPOs been accused of stifling competition in the healthcare supply chain, GPOs have been thought to impede innovation. One possible reason for this claim is that fixing prices for services makes it more difficult for GPOs to introduce innovative medical products into the market. These exclusionary contracts commit member hospitals to purchase supplies only from the manufacturers that contract with that particular GPO (Brock). The GPOs' dominance in the health care market alone, discourages hospital members from buying from providers outside their prescribed list and therefore discourages innovation in emerging areas such as biotechnology (McWilliams). In the Q and A with HPN, Leahey also believes that innovative products are not getting to

healthcare practitioners for the benefit of patients in a timely matter. Leahey also says individual codes for innovative products are only prospective in nature (Betz & Leahey). A concern of the new Antitrust Law is that GPOs have increasing pressure to develop standardized products. Likewise, “The process of evaluating new technology is slow and biased in favor of existing GPO contracted vendors, according to new manufacturers” (Roark, p. 38).

Another problem with GPOs is that most are owned by their members, who sit on their boards and are operated as cooperatives (Hovenkamp, 2002). This most likely is why Leahey claims that the bidding process must be opened up rather than the current process of using a bundle of products. He urges that GPOs not prohibit manufacturers from communicating directly with the doctors or caregivers who use the devices (Betz & Leahey). He also claims “*Hospitals may feel financially penalized by selecting products on needs of patients/doctors which could be a downside to purchasing through a GPO rather than directly through a manufacturer. There is the possibility that a GPO may abuse its power because services provided to one party are paid for by another party. One example, is that membership dues paid by hospitals is often set based on a GPO’s annual budget, set by its members*” (Betz & Leahey). Additionally Leahey claims, “The real problem is that GPOs no longer evaluate the product first and then evaluate a price” (Betz & Leahey, p. 62). The problem is that this sequence only helps GPOs, not the patients, the stakeholders who should be top priority. The higher a contract price, the more revenue a GPO generates. GPOs could abuse their power by setting a very high contract price.

Often the degree of satisfaction that a hospital reports to have with its primary GPO is inaccurate. One reason is that hospitals consist of so many different divisions and departments, which vary in their degree of satisfaction. “What takes 30 seconds on the pharmacy might take 48 hours on the med-surg side” (Serb, 2010, p. 42; Moore). In a survey that asked a question investigating GPOs’ relationships with their suppliers, and whether GPO’s save hospitals sufficient money, about 30 percent of responders said they did not know enough about GPOs to say one way or another (Serb). The article entitled “Best Prices Analysis-GPOs?” claims GPOs only report what they want to, to hospitals. For this reason, critics of GPOs argue that GPOs may not save hospitals through lower pricing (Betz & Leahey). Dedrick, for instance, argues for his pharmacy at Duke University Hospital to act as its own, allowing his company complete autonomy to make product changes as needed and as quickly as possible. Dedrick’s pharmacy has the infrastructure that allows it to act as its own GPO. Unlike traditional GPOs, the pharmacy at Duke University Hospital can maximize profit. The problem with traditional GPOs is that there is no constant unit price to standardize profit. The contracting cost is also not borne by the buyers and sellers. For this reason opponents argue that GPO’s objectives are not aligned with consumer’s interests. Although GPOs have been reported to be the preferred method of purchasing by 90 percent of hospitals, this may not actually be the case. Burns argues that GPO’s approval ratings dip when it comes to preference items, and all in all, that GPOs only report what they want to hospitals (Litan & Singer).

Some Strengths of GPOs vs. Manufacturers

Some research however, says that GPOs, do in fact offer lower purchasing costs (Hu & Schwarz, 2012). Due to a GPO's competitive cost position it potentially reduces a hospital's expenses by as much as 25 percent. For instance, hospitals are expected to save \$30,000 annually on orthopedic implants through the use of GPOs (McCarthy, 2008). Ron Small, Quality Affairs and Chief Pharmacy Officer at Wake Forest University Baptist Medical Center, said, "His pharmacy has saved \$100,000 in just one year, primarily with distribution agreements" (Hunt & Dedrick, p. 2). These large savings may be because GPOs track price changes on all of the drugs that they cover. Drug price forecasts from GPOs help members in the budget process by providing critical information on the market dynamics and high-cost drugs. The combined volume of multiple hospitals that GPOs handle helps GPOs negotiate lower prices (Hunt & Dedrick). Even with the CAF or Contract Administrative Fee, the GPO still lowers procurement costs further by reducing search and transaction costs (Saha et al). The opportunity for price negotiation is offered, and only offered by one organization, which helps hospitals cut costs (Hu & Schwarz, 2011). Other estimates of how much GPOs save are between 10 and 35 percent on medical supplies (Betz & Leahey).

Yet, it is not just financial benefit that GPOs offer. Historically, GPOs were formed to create a more straightforward process of purchasing versus buying directly through manufacturers (Brock). GPOs streamline the process of purchasing without needing more support personnel. Other benefits to using GPOs include their new roles as strategic consultants and informational powerhouses that go beyond group purchasing

(Betz & Leahey). Today's GPOs are providing market guidance to sellers. For example Novation's new technology program has many benefits. It keeps buyers updated with all technological information and improves supply chain efficiency by providing more cost effective and innovative products. The program also helps buyers find products that better match a company's financial and quality needs. The clinical review committees, employed by GPOs, have the job of assessing these products for the sole purpose of integrating new and unique technology into GPOs' purchasing contracts. Contrary to critics' reports, 63 percent of GPO members find that the product is a good value for the cost, according to HMFA's panel review. Furthermore, 50 percent of the HMFA Peer Review Program respondents agreed that the GPO's product caused improved productivity (An HMFA Peer Review, 2012). GPOs increase efficiencies through quantity discounts and shared administrative costs. Counter to critics, proponents of GPOS, argue that GPOs are in fact highly supported. In order to survive in the marketplace, agents of providers must fulfill needs of their customers and follow their principles. Betz argues that GPOs are not in need of further reform because they are in compliance with the HIPGA Code of Conduct (Betz & Leahey). Drug price forecasts from GPOs, also help members in budget process because the GPOs provide critical info on high-cost drugs and market dynamics (Hunt & Dedrick).

Innovation: GPOs vs. Manufacturers

The choice to purchase directly through a manufacturer or through a GPO is up to the hospital. While GPOs are most widely used, there is controversy regarding whether they stifle competition and innovation. There is also a question of whether a GPO does in fact, offer lower prices, with all its administrative fees and contract requirements. There is also concern about what value hospitals receive from these fees paid and how much of it actually makes its way down to hospitals. Independent purchases from suppliers can help cost containment through technological and business efficiencies. Suppliers also have partnership roles with hospitals and often communicate directly with the doctors or caregivers who use the devices. One example is that manufacturers tend to specifically size products by patient need (Betz & Leahey). Additionally there is more intimacy in the relationship between suppliers and healthcare organizations. Manufacturers may undertake activities to promote patient health that may benefit the general community. Some pharmaceutical manufacturers, for example, provide grants to physician-initiated research or other organizational activities without receiving benefits in return (Bruns & Lewis, 2005). On the other hand, as discussed, GPOs are used by the majority of organizations and offer the potential for great savings of thousands of dollars. Sole source contracts allow GPOs to sometimes provide more favorable prices for hospital members (S-HRG 107-899, 2003; McKenna). Proponents claim that GPOs stimulate competition because GPOs play off each other to serve their members. Other positive aspects of GPOs are their abilities to increase efficiencies, offer market guidance and strategic consulting beyond traditional group purchasing roles (Brock).

Solutions when Purchasing Through GPOs

Past research has developed various recommendations to solving some of the problems associated with both purchasing through GPOs and purchasing directly through manufacturers. Through incorporation of cost-cutting techniques, redefinition of values, participatory approaches, and Macroergonomics, hospitals have the potential to make more effective purchasing decisions when purchasing through GPOs and manufacturers.

I. Cost-Cutting Techniques

Many researchers focus on trimming costs since the cost of healthcare is having a negative impact on a more macro, national level. Some recommendations to avoid exacerbating our national deficit include buying in bulk when it makes sense. Buying healthcare products in bulk can save from 3 to 20 percent. Hospitals can also purchase online to get out of the habit of paying higher prices from vendors. Other efforts to reduce costs include establishing an inventory control system. Responsibility for ordering purchasing supplies and dealing with vendor accounts should be delegated to specific employees who can be held accountable (Groves, 2012). Websites like www.medicaleconomics.com/inventorycontrol, offer easy to use manual inventory control systems. These systems also reduce the need to make unanticipated purchases that are not accounted for in the hospital's budget. Other ways to reduce spending, according to Groves, include searching for misplaced items before making unnecessary purchases, and looking for bargains on refurbished equipment.

Standardization and utilization programs are worth considering. "A two-year standardization and utilization program at Altru Health System, Grand Forks, N.D., has

produced \$4.1 million in savings on medical supplies” (Neil, 2005, p. 46). Utilization means determining how a product is used and if it’s being used properly. These programs and approaches again help sort out what hospitals need versus what hospitals simply want. Hospitals can gain visibility into spending by also identifying standardization opportunities. GPOs have begun to do this standardize many of their bulk products to reduce prices. Like Groves, Neil recommends hospitals form committees with clinical representatives from each facility in the system (Neil). Like standardization, hospitals can use “Evidence Based Practices” to decrease unnecessary spending (McCarthy, 2012). Evidence based practices derive from comparisons with other companies and peer review of products. The sourcing processes can be very complex because it involves sourcing technology, and experts. By looking at other companies’ vendors and companies’ spendings, hospitals can determine if the benchmark price should be changed to make more profit. Request for Proposals (RFP) is a similar process to comparing vendors and expenditures, and can help identify best prices (Wagner, 2012). “Hospitals often overlook these opportunities to reduce service costs, even though the potential for cost savings is between 10 and 29 percent” (Wagner, p. 36).

II. Redefinition of Values

Cost trimming is just one value that hospitals factor into their purchasing decisions. Ray Moore, CMRP, MBA, system contract manager at PeaceHealth, Bellevue, Washington, claims that health-care is changing in terms of the way health-care purchasing decisions are evaluated and delivery of healthcare. “Like it or not, comparative effectiveness and value-based purchasing are part of the new equation”

(Kehoe, 2010, p.). Value can also be discussed in terms of a focus on effective quality improvement and system change, denoted as QI, Quality Improvement. QI initiatives are meant to improve safety and reliability of patient care programs (Hagg, Workman-Germann, Flanagan, Suskovitch, Schlachitti, Corum, & Doebbeling, 2003). The HMFA peer reviewed paper, goes on to define value as “The ability of a product to deliver a Return of Investment (ROI) and as the most important factor in the purchasing decision” (p. 2). Although past research urges hospitals to engage in value-based purchasing, there seems to be no consensus on what the concept actually means.

Nevertheless, in an attempt to convince readers of its importance, the authors of past literature discuss ROI, customer prioritization, assessment criteria, quality, and customer satisfaction as just a few criteria in association with value-based purchasing decisions. Although keeping costs down is a value, Mike Alkire, president of Premier Purchasing Partners says, “Members are looking far beyond the dollars and cents of supply costs. They’re closely examining population-based, delivery models and clinical integration across the spectrum of care” (Kehoe, p. 34). Selecting whom to purchase from is a crucial part of a hospital’s purchasing decision process and “More than 80 percent of respondents said safety and quality programs offered by GPOs are an important factor in their selection of a GPO” (p. 37). This implies that many hospitals value safety and quality when making purchasing decisions because these values are believed to contribute to more effective purchasing decisions and better patient outcomes (Callender & Grassman, 2010). Quality is defined in terms of six dimensions: safety, effectiveness, patient-centered care, timeliness, efficiency, and equity. These dimensions of quality are valued greatly by authors like Carayon, who strive for an effective

healthcare system. Similarly past research has emphasized the importance of creating and valuing patient-centered care, a healthcare system that prioritizes the patient's needs, preferences, and values (Hu & Schwarz, 2011).

Other values include making purchasing decisions that bring clinical improvements and incorporate physician preference (Kehoe). Joanne Aquilina, Vice President of Finance and CFO of Bethesda Healthcare System at Boynton Beach, adds that ROI is a big consideration especially if buying a big piece of equipment that is very expensive. Vendors will help calculate the price and ROI, but those numbers need to be reviewed and reference checked. She mentions the importance of having a vendor who will provide guidance, support, and training for hospital staff to enable the most effective and optimal patient outcomes (An HMFA Peer Review). Pajor, Administrative Director of Revenue Cycle from Norwalk Hospital in Norwalk CT, also mentions that the importance of a well-documented, and well-researched ROI, when making a decision to invest a large amount of money in a product. ROI goes along with RFP, where hospitals can use a template to incorporate their unique desires and specifications for the product or service. Additionally innovation must be considered and whether there is possibility of obsolescence with the currently used technology, because it is necessary to weigh the costs and benefits of buying a product now versus waiting for the newer model (An HMFA Peer Review).

There are various ways in which hospitals have implemented their values. One is through the support of the Agency for Healthcare Research and Quality (AHRQ), which is the nation's lead federal agency for research on health care quality, costs, outcomes, and patient safety. AHRQ is a major source of funding for hospitals and its research is

aligned with many hospitals' values of quality improvement, patient safety, optimal outcomes, clinical practice and technology assessment. HMFA also has a Peer Review Program, an objective 11-step process that evaluates products and services to ensure they are meeting minimum standards for quality and value. This program also can determine whether the vendor has a decent reputation. A company is given a Peer Review designation if it meets a minimum score regarding effectiveness, quality/usability, price, value, technical and customer support (An HMFA Peer Review). Hospitals even can implement values more simply by changing their focus from short-term issues to the longer-term relationships. "Entrepreneurial Purchasing" stresses that focusing on short-term issues does not help contribute to corporate strategy, nor develop innovative products. Instead, hospitals that focus on the short-term simply look for the best price and best deals when purchasing products. 'Winners' describe hospitals who value close-knit partnerships, hospitals that are willing to negotiate but always identify needs before selecting equipment (Coulson-Thomas, 2007).

III. Participatory Approaches

Partnership is a concept central to hospitals that value efficient, successful purchasing decisions. Partnership means involvement of multiple stakeholders in purchasing decisions. The phrase 'Multiple stakeholders' implies the involvement of direct end-users, the purchasing committee members; but also the indirect and perhaps most important audience, the doctors, and finally, the patients themselves. In fact, part of the lack of alignment between ideal and actual purchasing practices may be due to minimal consumer input and involvement. While the business community spends a

massive amount of money each year seeking consumer input, healthcare organizations have failed to realize consumer preferences and only now, are beginning to acknowledge its important role in adherence to treatment regimens.

Some hospitals have acknowledged the need to differentiate themselves from their competition through superior customer service. This can be done through patient satisfaction surveys and through peer review of products (Mele, 2008). By retrieving consumer input, hospitals can begin to look at the macro; the bigger picture. Currently the literature suggests that hospitals focus on the micro, or one facet of purchasing which has limited the effectiveness of the overall purchasing decision. Without input from the end users, the consumers, the clinics, hospitals, physicians and research, wasteful spending is bound to occur (Trautman, 2008). Most of the literature, lists that one of the ways hospitals can reduce purchasing costs, is to seek feedback from other teams. Specifically physicians should be actively involved in the bid process as well as representatives from other groups such as materials, finance, patient safety, quality, risk management and reimbursement (Fatholahi, 2009).

IV. Macroergonomics

We can better understand these participatory approaches to healthcare purchasing decisions through Macroergonomics, an area that deals with dimensions of organizational design and communication. It specially can be used to address the lack of communication between the manufacturers of products and services, Group Purchasing Organizations and distributors, and end users. This supply chain discussed in the literature was thought to be representative of this particular hospital's layers of bureaucracy.

Hospitals, like this large hospital in the Northeast, are very departmentalized. Labor is divided into groups of specialists and designed on the basis of function, product or services, or client class served. For instance at most hospitals like this one, there is a critical care department, a Procurement Department, a Surgical Department et cetera. These many departments can be described by what Hendrick (2002), calls horizontal differentiation. One problem with horizontal differentiation, for example, is the very different goals of Chief Executive Officers versus physicians. While CEOs work to contain costs, physicians tend to prioritize quality of medical equipment. There is also a high level of vertical differentiation in many hospitals, further adding to the complexity of the organization (Hendrick). This wide gap between top employees at the hospital, and those at the bottom, causes each stage of the supply chain to operate independently of one another, causing misaligned incentives and conflicting goals (An HMFA Peer Review).

Present Study

The present study aims to address issues caused by the employees described above by focusing on recommendations based on Macroergonomic principles to improve purchasing decisions by enhancing participatory approaches. Through interviews of buyers from the Procurement Department at a large hospital in the Northeast, the purchasing process as it pertains to healthcare is examined. The benefits of approaches used in the past will be integrated into recommendations for improvement of the purchasing decision system. Findings will be reported to the Director of Procurement in summary format. The study hypothesized (H1), that most purchasing is done through

GPOs rather than through manufacturers directly, and that GPOs are cost effective but impede innovation, and (H2), that there are limitations to the amount of end-user participation in the purchasing decision process. The first part of the study involved a comprehensive literature review that culminated in a formulation of the original healthcare-purchasing model (see Figure 1), based in large part on an evolving understanding of prior purchasing models (Figures 2, 3, and 4). The second part of the study involved a structured interview of the Procurement Department at a large hospital in New England.

Method

Participants

Participants consisted of 5 buyers, working under the Procurement Department at a large hospital in the Northeast and the Director of Procurement. All participants had worked at the hospital for a minimum of one year (mean = eight years), had a background education in business and extensive training in procurement.

Procedure

The Director of Procurement gave permission to distribute a recruitment flyer (Figure 5) among potential participants in the Procurement Department. The recruitment flyer emphasized the voluntary nature of the study. Structured interview were conducted with each of the five participants. The consent form described particulars of the interview (private setting, 30 minutes or less, at a time convenient for participants, with only

handwritten notes—no video or audio recording). These details were reiterated to participants in person. On the day of the interview, a consent form (Figure 6) was given to each potential participant, and signed. In the consent form (Figure 6), the general topics for the interview were explained.

Measures

Structured Interview

Questions in the structured interview script were centered around the following topic areas:

- How purchasing decisions are made in the Procurement Department and who is involved in these purchasing decisions; both individuals and groups
- When, how, why, products are purchased either directly from manufacturers or Group Purchasing Organizations
- Purchasing Priorities and the extent that cost/benefit analysis is used
- Factors that ultimately drive purchasing decisions
- The effectiveness of any recent cost-cutting initiatives
- How purchasing practices at this large hospital in the Northeast, compare to purchasing practices elsewhere
- Areas of potential improvement in the purchasing system

The complete interview is provided in Table 1

Analysis

A qualitative analysis of interview data was conducted. Step 1 involved transcribing handwritten notes taken at the time of the interviews into a word document. A separate new blank word document with the master code linked participant names to random codes generated with letters and numbers. Names were replaced with these random codes in the process of transferring handwritten notes into the word document. Concepts in contemporaneous notes of the interviews were summarized at this time.

Step 2 involved summarizing participants' answers to interview questions by first eliminating

questions that elicited the same response as a previously asked question. Step 3 involved analyzing results by reporting the most common answer(s) given, and by using general terms that quantified whether the majority or minority of participants gave a particular response.

Results

A glossary of the terminology, acronyms, and variables associated with the purchasing process is provided in Table 2.

The results of Step 3 of the Analysis are provided in Table 3. A new model for the hospital's purchasing and bid process is provided in Figure 7.

The healthcare purchasing model warrants expansion based on my analysis (consistent with H1). The model needs to include other purchasing entities: DAS, Suppliers, Distributors (see Figure 8).

Discussion

The study hypothesized that most purchasing is done through GPOs rather than through Manufacturers directly, and that GPOs are cost effective but impede innovation (H1). It also hypothesized that there are limitations to the amount of end-user participation in the purchasing decision process (H2).

Results partially supported Hypothesis 1. Consistent with (H1), purchasing through GPOs can be very cost effective. In contrast to (H1) however, GPOs were found to promote rather than limit innovation. Although a review of the literature suggests that end-user involvement is limited (H2), all the buyers stated that there was a good deal of end-user involvement. However, their definitions of end-user involvement varied greatly

(see Table 2). The majority of buyers could only acknowledge the involvement of the buyers and Bid Selection Committee members in the purchasing decision process. Doctors were only occasionally involved with the purchasing decision process if absolutely necessary. There was no mention of patient involvement, or involvement from other departments within the hospitals. These groups above served as the final end-users but only had indirect involvement with the bid process (see Figure 9). One reason is that there is a required contract between the hospital and purchasing entity whenever the purchase exceeds ten thousand dollars. The Director of the Procurement Department essentially limits involvement of stakeholders during the bid process by always making the final decision on which purchasing entity to use.

Interviews with buyers working in this hospital's Procurement Department revealed that healthcare purchasing practices are not defined starkly. The purchasing process extends beyond just GPOs and manufacturers (see Figure 8). In actuality, the purchasing decision process can involve purchasing through distributors, suppliers, manufacturers, GPOs, the DAS, and sole sources. Even more surprising, at times one or more of these terms may be synonymous with another. For instance, a distributor can be synonymous with the term GPO, but only in some circumstances. This lack of consistency among definitions of terms makes the purchasing process in healthcare even more difficult to analyze. Furthermore, it is the Selection Committee that makes the actual purchases, and the Director finalizes the purchasing decisions, rather than the entire Procurement Department. In particular, contrary to the expectation that a purchasing committee would be responsible for most Northeast United States' hospitals' purchasing decisions, it emerged that the Procurement Department, and specifically a

Selection Committee composed of chosen buyers, is responsible. The decision process at the hospital is more involved than suggested by a literature review. The purchasing process incorporates many types of bids, both formal and informal, as well as contracts laying out specific terms and conditions (see Figure 1).

Surprisingly, this large hospital is, in fact, practicing many of the strategies that researchers have recommended to cut costs and enhance product quality in order to improve the overall effectiveness of purchasing decisions. Lean manufacturing, a systematic approach to improving the reliability of manufacturing processes originally developed in the Japanese automobile industry, is already implemented at this hospital in regard to purchasing and was referred to throughout the interviews of the Buyers. It supposedly allows for elimination of operational barriers within the purchasing system. This approach removes non-value or 'wasteful' processing steps, in favor of improving the quality of purchasing decisions and bridging the gap between evidence and practice (Hagg et al). Lean processing, or lean manufacturing as it was often described, as an ideal or goal of the Procurement Department and its specific commodities, has dual aims to cover both domains of cost trimming and product quality enhancement.

The expectation that reliance on GPOs may impede innovation was not borne out, interviewees ranked innovation as one of the Procurement Department's top values. The role of Information Technologies (IT) in hospital innovation is huge. Not only do they contribute to cost cutting through e-procurement, but these software systems allow for more automated ordering of products. Enterprise Resource Planning (ERP) is an automated, paperless system that reduces non-value added steps and promotes informational flow throughout an organization (Callender & Grassman). One of material

management's best practices is inventory management, which involves innovative computer software for calculating reordering based on demand forecast and inventory. Innovative software like this allows for more efficient purchasing processes. The concept of obsolescence goes hand in hand with innovation. Just as GPOs were thought to inhibit innovation, some literature also claims that GPOs create the possibility of obsolescence. By establishing a five-year cost of acquisition, or limiting a contract with a GPO, hospitals like this one are able to keep up with technology advancements. Not only are most contracts limited to five or fewer years, new technology is part of some GPO contracts (Callender & Grassman).

This hospital does consider both the strengths and weaknesses of the purchasing entities that translate to their costs and benefits. For instance, interviewees agreed that it is best to use GPOs for most consumables that must be bought daily because GPOs can be used to negotiate a better price and to leverage purchasing power. Respondents also claimed it is easier often to go through a broad array of Suppliers and or Distributors, than going through Suppliers individually, one by one. For products that are very specialized or need replacement parts, respondents would often point to purchasing through sole sources. For bids over ten thousand dollars, the Director of the Procurement Department would often choose to purchase from a manufacturer directly. The rate of such purchases was unexpected. The literature review suggested that GPOs were used much more often for purchasing than manufacturers, because GPOs are most often used for high-volume and lower priced products. Considering who to purchase from and what products to purchase, involves conjoint analysis, a process to predict consumer preferences. Conjoint analysis is a process where buyers consider the value of individual

features of a product to then determine its overall value. In other words there are tradeoffs that must be made and not all factors are equally desired, which ultimately allows the selection committee to come to a purchasing decision (Mele). Factors considered should be the important values of products such as ease of use, price and quality. For instance, this particular hospital most values product longevity, innovation, enhanced productivity and end-user involvement.

There are many additional ways to assess the value of purchasing through one entity over another and the value of purchasing certain products. Interviews revealed that this hospital has already adopted some value strategies including ROI, benchmarking, lean manufacturing, leveraging power and standardization opportunities. First an ROI determination is often conducted, to help determine exactly what the selection committee is looking for in a product and compare similarities and differences among vendors. Afterwards an RFP is created, a request based on needs criteria to assess the products by age, and maintenance requirements and costs (An HMFA Peer Review). Benchmarking is definitely a strategic management process because it strategically narrows down the decision by comparing similarities and differences among vendors. Similarly, because this hospital values quality and cost trimming, it uses GPOs and the DAS for example, to leverage volume power. Through alliances with other purchasing companies through the DAS, this hospital is able to generate greater discount. However, going forward, it is recommended to ensure that any alliance is consistent with the hospital's prior product preferences (Loesch, 1991). This hospital also takes advantage of standardization opportunities, which not only decreases prices of products, but also reduces inappropriate practices.

Despite all the current effective strategies and practices used by this hospital, based on analysis of interview responses and the literature review, several recommendations emerge for increasing effectiveness of purchasing decisions within the healthcare system. Evidence Based Practice Centers (EPCs), formed under AHRQ, the Agency for Healthcare Research and Quality, help hospitals make the most effective decisions possible by using scientific methodology and review from an unbiased third party (Fatholahi). Another strategy, suggested by participants, regards planning for purchasing far in advance and in a more systematic manner. Due to what appears to be minimal participation of end-users in the purchasing decision process, a variety of participatory approaches can be recommended to hospitals to incorporate into purchasing practices.

One of the first things Buyers said of end-users during meetings is that it is hard to visualize what they see. Additionally interviewees were not very forthcoming in regard to whether there was a need to increase effectiveness of purchasing decisions, and pointed out that that was not their decision. This was the decision of the Director of Procurement. Interviewees additionally hesitated to mention that the direct end-users were not involved and stated that the organizational climate was very positive. Some of their answers could suggest a lack of open communication among various stakeholders. First, there could be better role clarity for each of these stakeholders to reduce confusion about how they can contribute to the purchasing process. This hospital seems highly centralized, a Macroergonomic term that describes organizations that limit formal decision making to a centralized few individuals higher up in the organization

(Hendrick). A question regarding the organizational culture elicited the same response from all interviewees: There is a positive culture within the Procurement Department.

Part of the problem according to Mullins (1993) is that “There is no consensus on meaning or application of the concept of culture to work organizations” (as cited in Hignett, 2001, p. 62). Hignett claims that ergonomics should be a socially situated practice that is instilled within the organizational culture. Ergonomics has been defined by Wilson (2000) as “a way to understand people and their interactions with each other and sociotechnical systems, and to improve those interactions in real settings” (as cited in Carayon, p. 528), such as healthcare organizations. The issue in this healthcare organization is that the Director of Procurement has the final say in purchasing decisions and was the only one believed to influence the effectiveness of the purchasing process. Like the employee populations studied in a large metropolitan medical center with an Environmental Health and Safety Department and an Employee Health Department, Buyers at this hospital rely heavily on recommendations from administrative contacts in high positions in the organization.

To address the possible shortcomings discussed above, employee training on teamwork could enhance the communication among employees and patients. Training can reinforce group skills, help establish a rapport among team members in the Procurement Department, and address the wide individual differences across the hospital (Bohr, 1997).

Increased participation among stakeholders and a more open, approachable organizational climate might be facilitated by a high involvement or ‘commitment’ approach. This approach focuses on permanence or continuous change rather than

temporary change (Hendrick). It incorporates a continuous improvement process in which everyone is contributing input and getting feedback regarding the effectiveness of the purchasing decision process. A more effective approach to purchasing decisions would specifically involve patient-centered care, a relatively new movement, that allows patients, the real end-users of hospital services and products, to have a bigger role in purchasing decisions (Carayon). This would also mean more input from doctors who work directly with patients and highly value them. Currently, according to some research, there tends to be a lack of alignment between doctors' purchasing preferences and buyers' preferences, which can make for a negative organizational climate. It is important that employees receive education and training on teamwork, so physicians and buyers for instance can better negotiate and come to a consensus on how to control costs and still offer medically sound choices of products that physicians approve of (Fuller).

Limitations of the Study

While a representative sample of the population of buyers at one large hospital in the Northeast was obtained, interviews were limited to buyers of only one Procurement Department. A comprehensive evaluation of stakeholder involvement in the purchasing decision process will require access to all user groups, which was beyond the scope of this study.

Concluding Remarks

Overall, the purchasing process at the hospital is more comprehensive and far-reaching than had been expected, involving many purchasing entities. However, as hypothesized, involvement among various stakeholders in the purchasing process is limited. An improved understanding of the purchasing processes of a representative New England hospital allows several recommendations to increase end-user participation and the overall effectiveness of this healthcare purchasing system.

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Tables and Figures**Table 1:**

These were the original questions developed for the interview

Structured Interview Script

Exploring the topic of Participatory Approaches to Purchasing Decisions within the Healthcare System

1. About how long have you worked at this hospital?
Prompt: What positions of employment have you held at this hospital?
2. How long have you been an employee in the Procurement Department?
3. What field of study is your background training in?
4. Do you have any specific role within the Procurement Department and if you are a Buyer, what commodity are you a buyer for?
5. What are the most expensive items that you purchase?
6. What are the least expensive items you purchase?
7 Do you ever involve or consult with people from outside the Procurement Department prior to making a purchasing decision?
Prompt: If so, can you please give me some examples?
8. I have identified three groups that are involved in the supply chain for hospitals.
1. Manufacturers of products & services
2. GPO's (Group Purchasing Organizations) and Distributors
3. End users: hospitals, clinics, physicians, or research
I want to ask you if any of the three groups ever make it difficult to make purchasing decisions?
How about the Manufacturers of products & services? Do they ever make your job difficult?
How about GPOs and Distributors? Do they ever make your job difficult?
How about the End users: hospitals, clinics, physicians, or research? Do they ever make your job more difficult to perform?
9. Does the organizational climate at this hospital support good decision-making about purchases?
Prompt: Can you give me some examples?
Prompt: Do you feel you are allotted enough time to make good purchasing decisions?
Prompt: Do all levels of the organization have a voice when purchasing decisions are made?
10. How often do you use GPOs?
Prompt: Can you please give some examples of when and for which items GPOs are used?
11. At this hospital, when you buy expensive items, do you buy directly from Manufacturers?
Prompt: If so, can you give some examples of when and for which types of items this occurs?
12. Which Manufacturers and GPOs does this Procurement Department use and how often do you use manufacturers?

13. What do you believe to be the tradeoffs between purchasing from Manufacturers directly, versus going through a GPO(s)?
Prompt: Why do you use these instead of others?
Prompt: Which do you enjoy interacting with more, manufacturers or GPOs?
14. Which do you think is better route for purchasing expensive medical devices-GPOs or manufacturers?
Prompt: Is this the same for all products, or only some products?
Prompt: Can you please give some examples?
15. How much is the end-user involved in making purchasing decisions about these expensive items?
Prompt: Is this involvement effective, or should there be more/different types of involvement in these purchasing decisions?
16. Which do you think is a better route for purchasing items in large quantities: GPOs or Manufacturers?
Prompt: Is this the same for all products, or only some products?
17. How much is the end-user involved in making purchasing decisions about buying items in large quantities?
Prompt: Is this involvement effective, or should there be more/different types of user involvement in these purchasing decisions?
18. During the bid review process, do you consider any issues that users of a product may have?
Prompt: Can you please give some examples?
19. I came up with a list of factors that might be considered when buyers make purchasing decisions about big-ticket items (more expensive items). If you wouldn't mind, I'd like you to rate these factors on a scale of 1 to 10, where 1 is least important, 10 is most important.
Prompt: Can you please give some examples?
I have nine factors.
The first factor is product longevity. On a scale of 1 to 10, how important is this for big-ticket items, with 10 being most important?
Maintenance and support fees. How important is that for making decisions about big-ticket items?
Enhanced Productivity?
Clinical efficacy for medical equipment?
Innovation?
Satisfying physicians?
Involving end-users?
Peer review of products?
Patient satisfaction?
20. I came up with a list of factors that you might consider when you make purchasing decisions about low ticket items (less expensive items). I would like you to rate them on a scale of 1 to 10, where 1 is least important, 10 is most important).
Here are those nine factors again

The first factor is product longevity. On a scale of 1 to 10, how important is this for big-ticket items, with 10 being most important?
Maintenance and support fees. How important is that for making decisions about big-ticket items?
Enhanced Productivity?
Clinical efficacy for medical equipment?
Innovation?
Satisfying physicians?
Involving end-users?
Peer review of products?
Patient satisfaction?
21. Does the Procurement Department ever assess any purchasing contract?
Prompt: Please provide specifics on how the Procurement Department measures the effectiveness of these contracts.
Prompt: Some hospitals use a system of auditing to assess the effectiveness of a purchasing department's contract with the GPO and/or Manufacturer? Do you use a system of auditing or have anything beyond regular evaluation to assess effectiveness of the contract?
22. How does the Bid Review Process evaluate and score the supplies based upon the criteria of the bid?
23. Lastly, can you suggest any ways that the Procurement Department at this hospital could be more effective?

Table 2:

Before this study, I was unaware of all the terminology, acronyms, and variable definitions associated with the purchasing process. For this reason a glossary is included in my paper.

Glossary

Name of Term	Term clarification and definition
Benchmarking	The process of comparing purchasing practices at one organization with other organizations' best purchasing practices. A strategic management process
Bid all out	A product can 'Bid all out' when a product being purchased is over \$10,000 (unless purchase qualifies as emergency purchase or sole source), and there is no established contract. It is a public bid where manufacturers and suppliers are invited. For capital equipment-put it out to bid if price is > than \$50,000.
Capital Equipment	A very costly service or product or high-ticket item
Committee	Only used for bids (RFP) and selection committee presented with bid responses. Evaluates suppliers based on criteria of the bid and scoring.
Commodity	A division within the Procurement Department
Consumables	A frequently used, inexpensive service or product or low-ticket item
Contract	A legally-enforceable agreement to do something
DAS (Department of Administrative Services)	Purchasing services or products through the state. Sometimes DAS bids out its own processes or tags onto other contracts
Distributor	Multiple suppliers make up a Distributor. In interview said to sometimes be easier to purchase through a Distributor than through a manufacturer.

End-user	Various Definitions according to the participants of the structured interview. Could include the continuum of indirect users of products and services purchased (the Buyers, Bid Committee members) to direct users (patients, doctors).
GPO	Gives access to a wide array of Suppliers and Distributors. Strengths and Weaknesses discussed in introduction that contrasts purchasing through GPOs to purchasing through Manufacturers.
Informal Bid type Process	Purchases between \$10,000 and \$50,000. Includes RFQ, Invitation to Bid, or Oral Requests
ITB (Invitation to Bid)	Purchases that will be \$50,000 and above. Business is awarded to the lowest qualified bidder.
Lean Manufacturing/processing	One philosophy to approaching purchasing decisions that focuses on the ideals of eliminating time and waste, improving effectiveness of purchasing decisions and getting rid of non-value added processes. Associated with innovation-faster a patient is in and out, more revenue the physician generates
Legal T's and C's	A Business standards contract and its negotiated legal terms and conditions
LOP (letter of Permittance)	This is a form/contract for a GPO to fill out when you have agreed to purchase through them (usually 1 GPO is used per product). This form is forwarded to the supplier. Also sometimes a locally negotiated contract is used.
Manufacturer	The actual producers of the specific good or service
PR (Purchase Requisition)	The term for initiating a purchase or bid process, requesting a contract,

RFI (Request for Information)/ROI (Request of Information)	Does not involve a bid. It is a process to gather information about a future purchase. Takes into account factors such as innovation, possibility of obsolescence, life-cycle cost, 5 year cost of acquisition, maintenance and service fees, physician confidence
RFQ (Request for Quotes)	Discussed under the context of bid types as an informal bid. A bid valued between \$10,000 and \$50,000. Looks for pricing from one or more vendors for purchase. Hospital chooses to purchase services from the lowest qualified bidder.
RFP (Request for Proposal)	Discussed under the context of bid types as a formal bid and a public and open process. A bid valued at \$50,000 and greater. In this process, the most qualified bidder wins, regardless of price. Pertains to purchases \$10,000 or above.. Based on Multi-criteria some of which include quality, past performance, price, warranty etc. A request based on needs.
Sole Source	A type of contract used in purchasing decisions. A businesses standards contract, unique from the rest of the industry because it is at a higher level and concerning purchases over the bid threshold
Supplier	The main Distributor of a product. This large hospital has maybe about 500. A supplier is not always the manufacturer. In interview said to sometimes be easier to purchase through a Supplier than through a manufacturer
Vendor	An enterprise that contributes products or services in a supply chain. It may or may not be synonymous with the terms 'Distributor,' 'Supplier,' or 'Manufacturer.' Generally a vendor sells items to the next link in the supply chain
Visibility	The transparency of the purchasing process for all stakeholders involved

Table 3:

Structured interview questions answered by all participants, presented in aggregate form

Questions answered by all Participants	Answers
1. About how long have you worked at this hospital? a. Prompt: What positions of employment have you held at this hospital?	All participants held positions as Buyers.
2. How long have you been an employee in the Procurement Department?	Mean # years for employment within the Procurement Department at this hospital was 8 years. Most employees worked within the Department for less than 10 years.
3. What field of study is your background training in?	The participants all had background training in areas of business
4. Do you have any specific role within the Procurement Department and if you are a buyer, what commodity are you a buyer for?	Roles of Buyers and commodities are not listed to maintain confidentiality of participants
5. What are the most expensive items that you purchase?	There were different opinions regarding the most important thing the Procurement Department does but almost of 50% of participants believed that supporting the department and committee members was the most important thing the department does.
6. What are the least expensive items you purchase?	Depended on the commodity within the Procurement Department Some included carousels, microscopes, software, fire trucks and construction building renovations
7. Do you ever involve or consult with people from outside the Procurement Department prior to making a purchasing decision? a. Prompt: If so, can you please give me some examples?	There was a consensus. All participants answered that they do involve or consult with people from others outside the department. Most common answer: with other departments within hospital, especially Doctors
8. I have identified three groups that are involved in the supply chain for hospitals. 1. Manufacturers of products & services 2. GPOs (Group Purchasing Organizations) and Distributors 3. End users: hospitals, clinics, physicians, or research -How about the Manufacturers of products & services? Do they ever make your job difficult? -How about GPO's and distributors? Do they ever make your job difficult? -How about the End users: hospitals, clinics,	The majority of users claimed no, they do not find that any of the listed groups make their jobs difficult. Some participants did mention however that participants in other commodities may find it harder to deal with certain groups.

physicians, or research? Do they ever make your job more difficult to perform? a. Prompt: Can you give me some examples?	
9. Does the organizational climate at this hospital, support good decision-making about purchases? a. Prompt: Do you feel you are allotted enough time to make good purchasing decisions?	The majority of individuals agreed that the organizational climate supports good decision making and that they have enough time to make purchasing decisions. Some however felt not enough time was allocated for proper procedures and work flow processes.
10. How often do you use GPOs? Prompt: Can you please give some examples of when and for which items GPOs are used?	Answers varied with respect to how often GPOs are used. Some participants use them on a daily basis for consumables; some rarely or only established ones.
11. At this hospital, when you buy expensive items, do you buy directly from Manufacturers?	About half of participants use Manufacturers either often or established Manufacturers occasionally.
12. Which manufacturers and GPO's does the Procurement Department use and how often do you use manufacturers? a. Prompt: Why do you use these instead of others?	Participants did not answer which Manufacturers were used specifically. Answers included daily use, though not as common as GPO use, and some answers included the use of suppliers, which was pointed out to not always be a term synonymous with 'Manufacturer'
13. What do you believe to be the tradeoffs between purchasing from Manufacturers directly, versus going through a GPO(s)?	Benefits of GPOs: Can use them to negotiate a better price, Can leverage large amount of purchasing power Easier to go through broad array of suppliers and distributors, than going through Suppliers individually, one by one. Benefits of Suppliers and Distributors: Sometimes easier to go through than the manufacturer directly. No Benefits of Manufacturers were mentioned
15. How much is the end-user involved in making purchasing decisions about these expensive items? a. Prompt: Can you give some examples? b. Prompt: Is this involvement effective, or should there be more/different types of	Definitions of the term 'End-user' differed. All claimed that the end-user is very involved at least indirectly. Bid Committee members and commodity members could be considered end-users, or the involvement of doctors. Some stated that the end-user may not have direct involvement in the

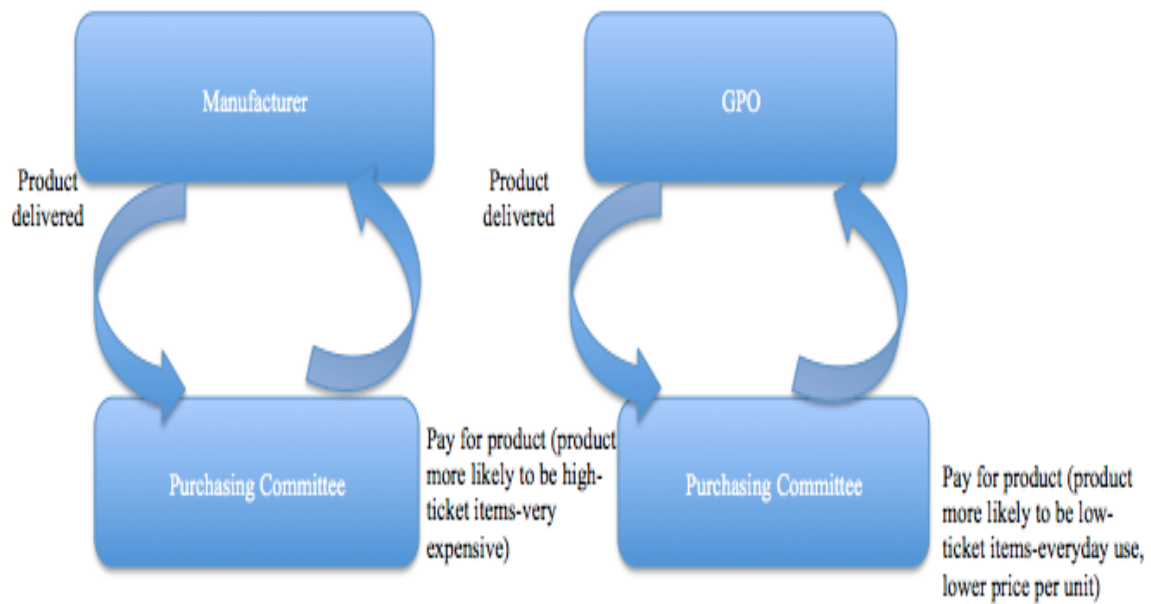
involvement in these purchasing decisions?	purchasing decisions.
<p>16. Which do you think is a better route for purchasing items in large quantities: GPOs or Manufacturers?</p> <p>a. Prompt: Is this the same for all products, or only some products?</p> <p>b. Prompt: Can you please give some examples?</p>	Depends, or not necessarily use either GPO
<p>18. During the Bid Review Process, do you consider any issues that users of a product may have?</p> <p>a. Prompt: Can you please give some examples?</p>	About half of participants did not answer. They said cost savings or looking to ensure quality products.
<p>19. I came up with a list of factors that might be considered when buyers make purchasing decisions about big-ticket items (more expensive items). If you wouldn't mind, I'd like you to rate these factors on a scale of 1 to 10, where 1 is least important, 10 is most important).</p> <p>I have nine factors.</p> <p>The first factor is product longevity. On a scale of 1 to 10, how important is this for big-ticket items, with 10 being most important?</p> <p>Maintenance and support fees. How important is that for making decisions about big-ticket items?</p> <p>Enhanced Productivity?</p> <p>Clinical efficacy for medical equipment?</p> <p>Innovation?</p> <p>Satisfying physicians?</p> <p>Involving end-users?</p> <p>Peer review of products?</p> <p>Patient satisfaction?</p>	Innovation, enhanced productivity, product longevity, and end-users were the most common answers (No rank order emerged). Participants were not able to complete the ranking for all nine factors.

<p>21. Does the Procurement Department ever assess any purchasing contract?</p> <p>a. Prompt: Please provide specifics on how the Procurement Department measures the effectiveness of these contracts.</p> <p>b. Prompt: Some hospitals use a system of auditing to assess the effectiveness of a purchasing department's contract with the GPO and/or manufacturer? Do you use a system of auditing or have anything beyond regular evaluation to assess effectiveness of the contract?</p>	<p>Most common answer was that there is no system of auditing. There is a Legal T's and C's Contract however (see Table 3).</p>
22. How does the bid review process evaluate and score the supplies based upon the criteria of the bid?	Multi-criteria factors, benchmarking and comparisons, RFP, RFQ, software
23. Lastly, can you suggest any ways that this hospital's Procurement Department could be more effective?	Most common answer was no. However, some participants, felt purchases could use more of a planning process.
24. Do benefits of innovation outweigh costs? (*ADDED QUESTION)	Need to have right amount of innovation-a question that was challenging. Not want too much or too little innovation.
25. Do GPOs stifle or promote innovation? (*ADDED QUESTION)	They can do both. Same answer as Q.24 but importance of ROI discussed

Figures

Figure 1

Who hospitals purchase from—a model of how healthcare-purchasing works based on a literature review prior to interviewing Buyers at a hospital.



Note: Figures 2, 3, and 4 contributed to the original conceptual model of how healthcare purchasing works.

Figure 2

A model of how healthcare purchasing works from Burns (2008)

Exhibit 1. Healthcare Supply Chain Configuration (Adapted from Burns, 2002)

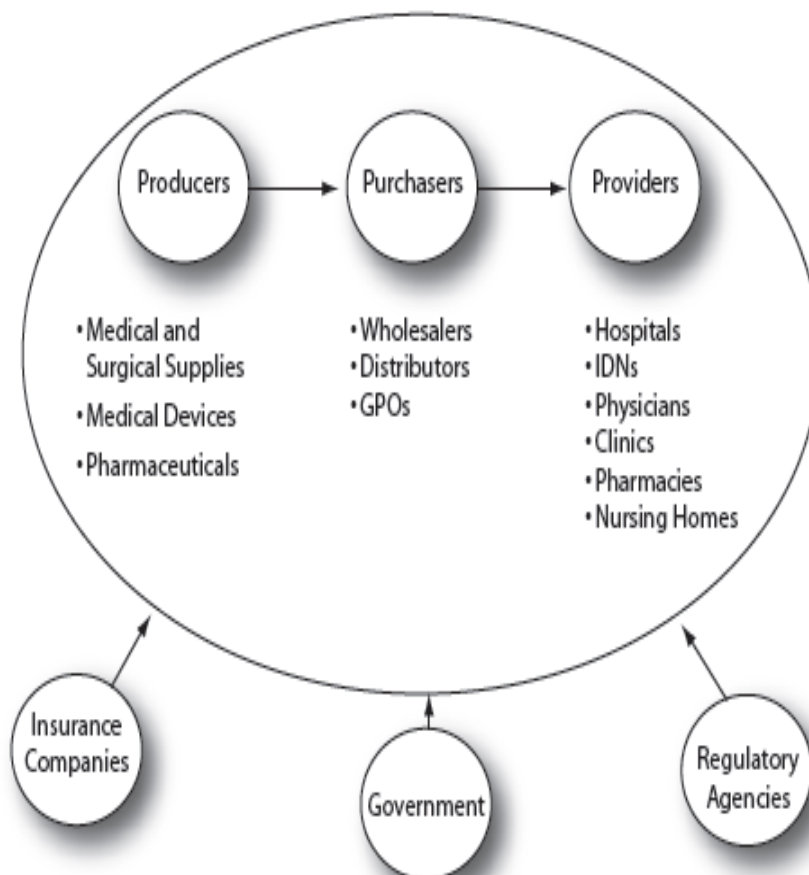


Figure 3

The interaction between GPOs, Manufacturers and Hospitals according to Saha (2010)

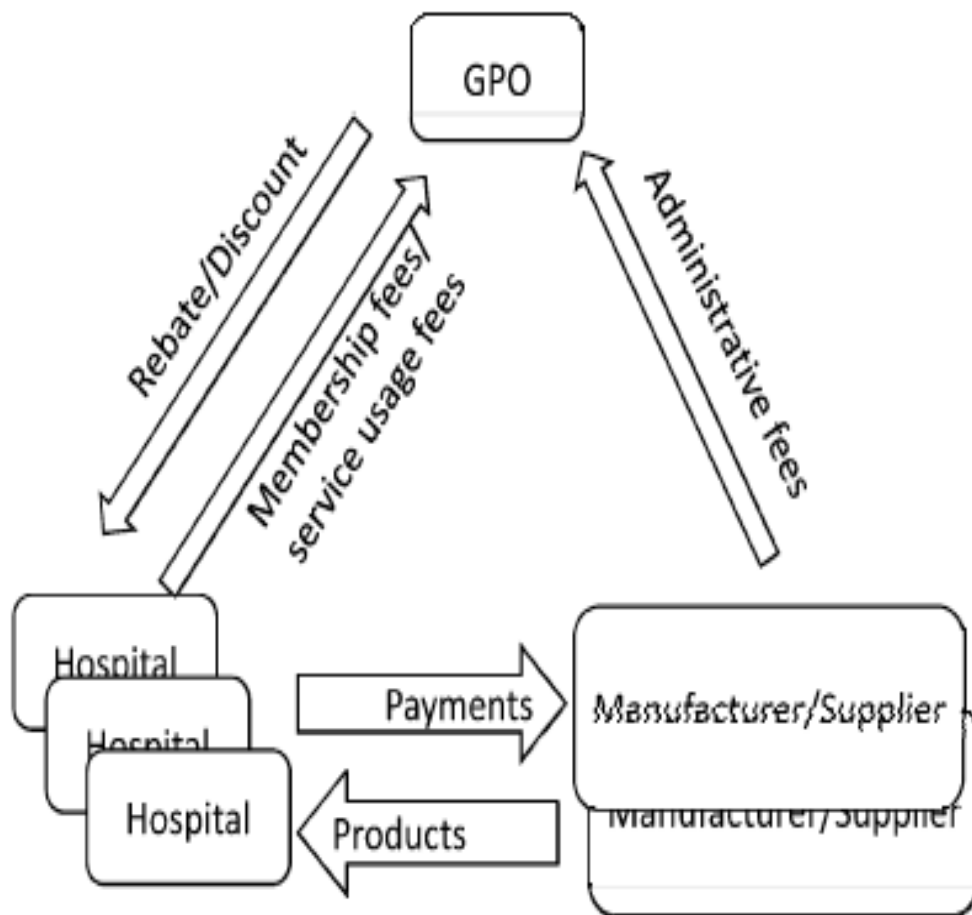


Figure 1: price structure

Figure 4

Callender and Grassman's (2010) model for healthcare product flow

Exhibit 2. Healthcare Product Flow

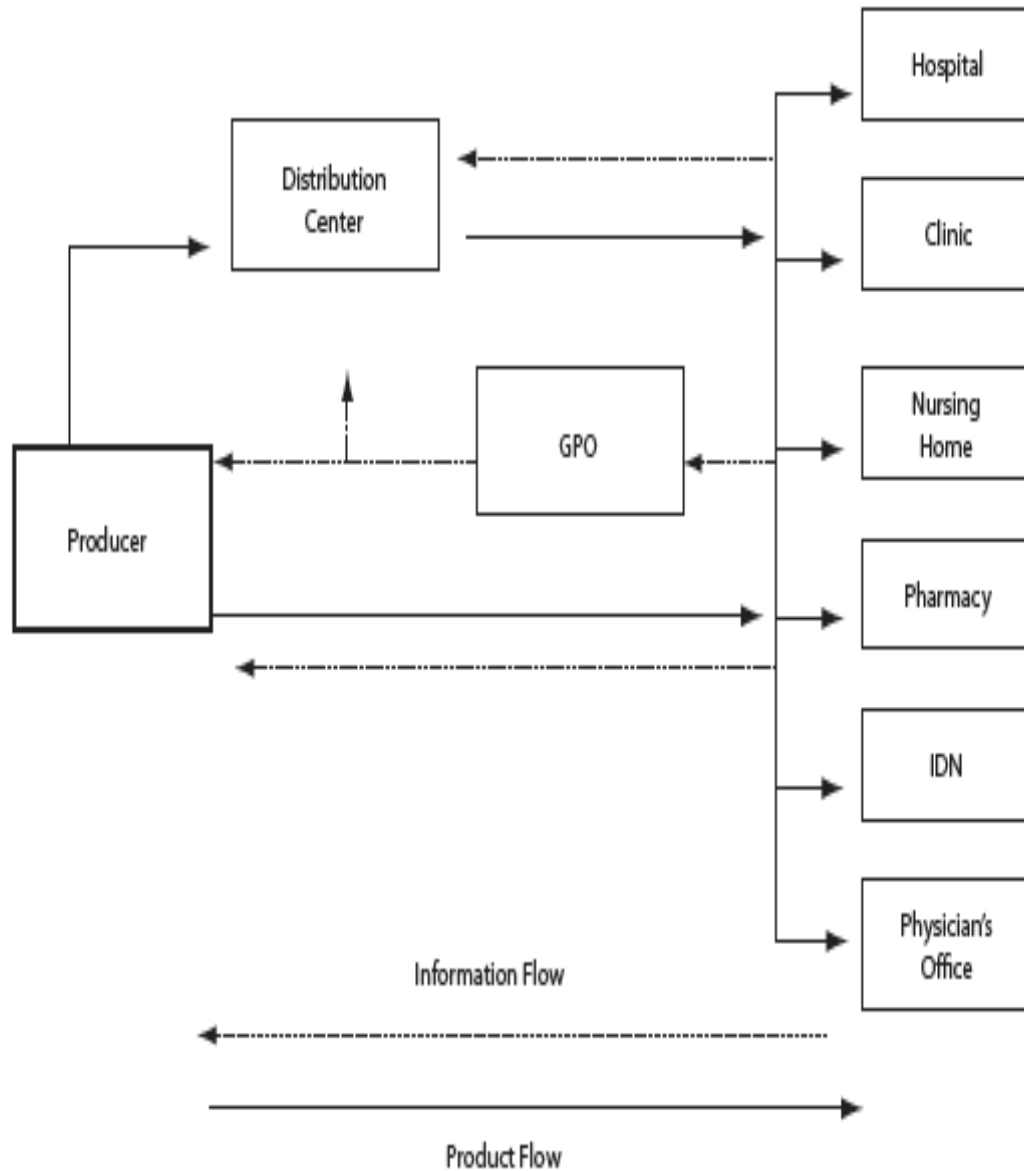
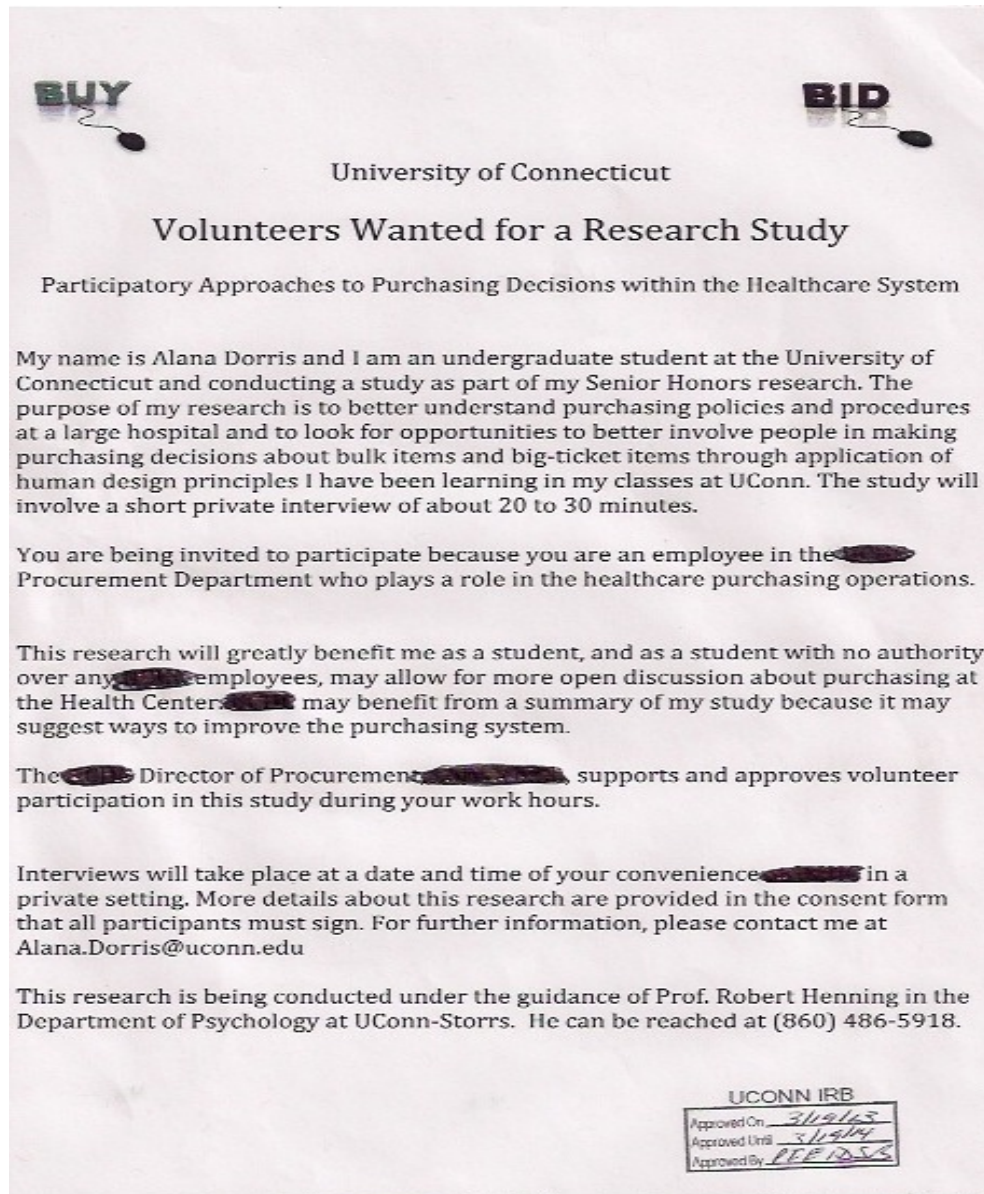


Figure 5
Recruitment Flyer



BUY **BID**

University of Connecticut

Volunteers Wanted for a Research Study

Participatory Approaches to Purchasing Decisions within the Healthcare System

My name is Alana Dorris and I am an undergraduate student at the University of Connecticut and conducting a study as part of my Senior Honors research. The purpose of my research is to better understand purchasing policies and procedures at a large hospital and to look for opportunities to better involve people in making purchasing decisions about bulk items and big-ticket items through application of human design principles I have been learning in my classes at UConn. The study will involve a short private interview of about 20 to 30 minutes.

You are being invited to participate because you are an employee in the [REDACTED] Procurement Department who plays a role in the healthcare purchasing operations.

This research will greatly benefit me as a student, and as a student with no authority over any [REDACTED] employees, may allow for more open discussion about purchasing at the Health Center. [REDACTED] may benefit from a summary of my study because it may suggest ways to improve the purchasing system.


The [REDACTED] Director of Procurement, [REDACTED], supports and approves volunteer participation in this study during your work hours.

Interviews will take place at a date and time of your convenience [REDACTED] in a private setting. More details about this research are provided in the consent form that all participants must sign. For further information, please contact me at Alana.Dorris@uconn.edu

This research is being conducted under the guidance of Prof. Robert Henning in the Department of Psychology at UConn-Storrs. He can be reached at (860) 486-5918.

UConn IRB
Approved On 3/19/13
Approved Until 3/19/14
Approved By P.F. 1255

Figure 6
Consent Form

Consent Form for Participation in a Research Study
 **University of Connecticut**

Principal Investigator: Robert Henning, Ph.D.
Student Researcher: Alana Dorris
Study Title: Participatory Approaches to Purchasing Decisions within the Healthcare System

Introduction

I am an undergraduate student at the University of Connecticut and conducting a study on hospital purchasing decisions as my Senior Honors Project. You are being invited to participate because you are a hospital employee working in the Procurement Department, who plays a role in the healthcare purchasing operations at [REDACTED] through your help I hope to gain a better understanding of the functioning of hospital purchasing systems.

Why is this study being done?

As a student, I would first like to better understand purchasing policies and procedures at a large hospital. I will then look for opportunities to better involve people in making purchasing decisions about bulk items and also big-ticket items through application of human design principles I have been learning about in my classes at UConn.

What are the study procedures? What will I be asked to do?

If you agree to take part in this study, I would like to interview you in a private setting for 30 minutes or less. I will ask you about your experiences serving on a purchasing committee at UCHC, or making purchasing decisions.

I will be asking interview questions that fall under the following categories:

- How purchasing decisions are made at [REDACTED] and who is involved in these purchasing decisions; both individuals and groups
- When, How, Why, products are purchased either directly from manufacturers or from a Group Purchasing Organization
- Purchasing priorities and the extent that cost/benefit analysis is used
- Factors that ultimately drive purchasing decisions
- The effectiveness of any recent cost-cutting initiatives
- How [REDACTED] purchasing practices compare to purchasing practices elsewhere
- Areas of potential improvement in the purchasing system

The interview will be conducted at a time that is convenient to you. You will not be video taped nor audio recorded. However, I would like to take some handwritten notes so that I do not miss anything.

UConn IRB
Approved On 3/19/13
Approved Until 3/19/14
Approved By PRENSIS

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What are the risks or inconveniences of the study?

The survey will require about 20 to 30 minutes of your work time, and this may inconvenience you. Please let me know if 30 minutes is too long, in which case I can skip some of the interview questions.

The interview questions are designed to be straightforward and factual. However, if you feel a question is asking about a sensitive topic, please let me know and we can skip over this question. You can also choose to terminate the interview and withdraw from this study at any time.

I will be preparing a summary of my findings to share with the Director of Procurement at [REDACTED]. If this summary was not prepared properly, for example: If your interview responses were quoted, this might have negatively impact your standing as a [REDACTED] employee. Steps will be taken to minimize this risk, as explained below.

What are the benefits of the study?

As a student with no authority over any [REDACTED] employees, it is possible that [REDACTED] employees that are interviewed will speak more openly. This would allow me to gather information about purchasing operations that is not readily available to supervisors or managers. [REDACTED] may benefit if the summary findings suggest ways to improve the purchasing system. I personally will benefit as a student, and may pursue graduate study related to this project as part of my career.

Will I receive payment for participation? Are there costs to participate?

There are no costs, and you will not receive any payment for being in this study.

How will my personal information be protected?

The following procedures will be used to protect the confidentiality of your data. Interviews will be conducted in a private setting. Interview notes will not contain names of participants, and will be labeled with random codes in place of names. Notes will not be transcribed. Notes will be destroyed after six months. At the conclusion of this study, the researchers will prepare a summary of findings to share with the [REDACTED] Director of Procurement. Your name will not be included in this summary, and you will not be quoted. Any findings will be reported at a group level rather reporting something specific than only one individual said. In addition, my summary will be reviewed by the Principal Investigator on this project, Professor Robert Henning, to minimize the risk to individual workers.

You should also know that the UConn Institutional Review Board (IRB) and the Office of Research Compliance may inspect study records as part of its auditing program, but these reviews will only focus on the researchers and not on your responses or involvement. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

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Approved On	3/19/12
Approved Unit	3/19/12
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Can I stop being in the study and what are my rights?

You do not have to be in this study if you do not want to. If you agree to be in the study, but later change your mind, you may withdraw at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate. In the event that a specific topic makes you feel uncomfortable, you do not have to answer any question that you do not want to answer.

Whom do I contact if I have questions about the study?

Take as long as you like before you make a decision. I will be happy to answer any question you have about this study. If you have further questions about this study or if you have a research related problem, you may contact the principal investigator, Robert Henning at (860) 486-5918, or the student researcher, Alana Dorris, at Alana.Dorris@uconn.edu. If you have any questions concerning your rights as a research participant, you may contact the University of Connecticut Institutional Review Board (IRB) at 860-486-8802.

Documentation of Consent:

I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement and possible risks and inconveniences have been explained to my satisfaction. I understand that I can withdraw at any time. My signature also indicates that I have received a copy of this consent form.

Participant Signature: _____

Print Name: _____

Date: _____

Signature of Person
Obtaining Consent

Print Name: _____

Date: _____

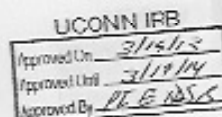


Figure 7:

The actual purchasing and Bid Process

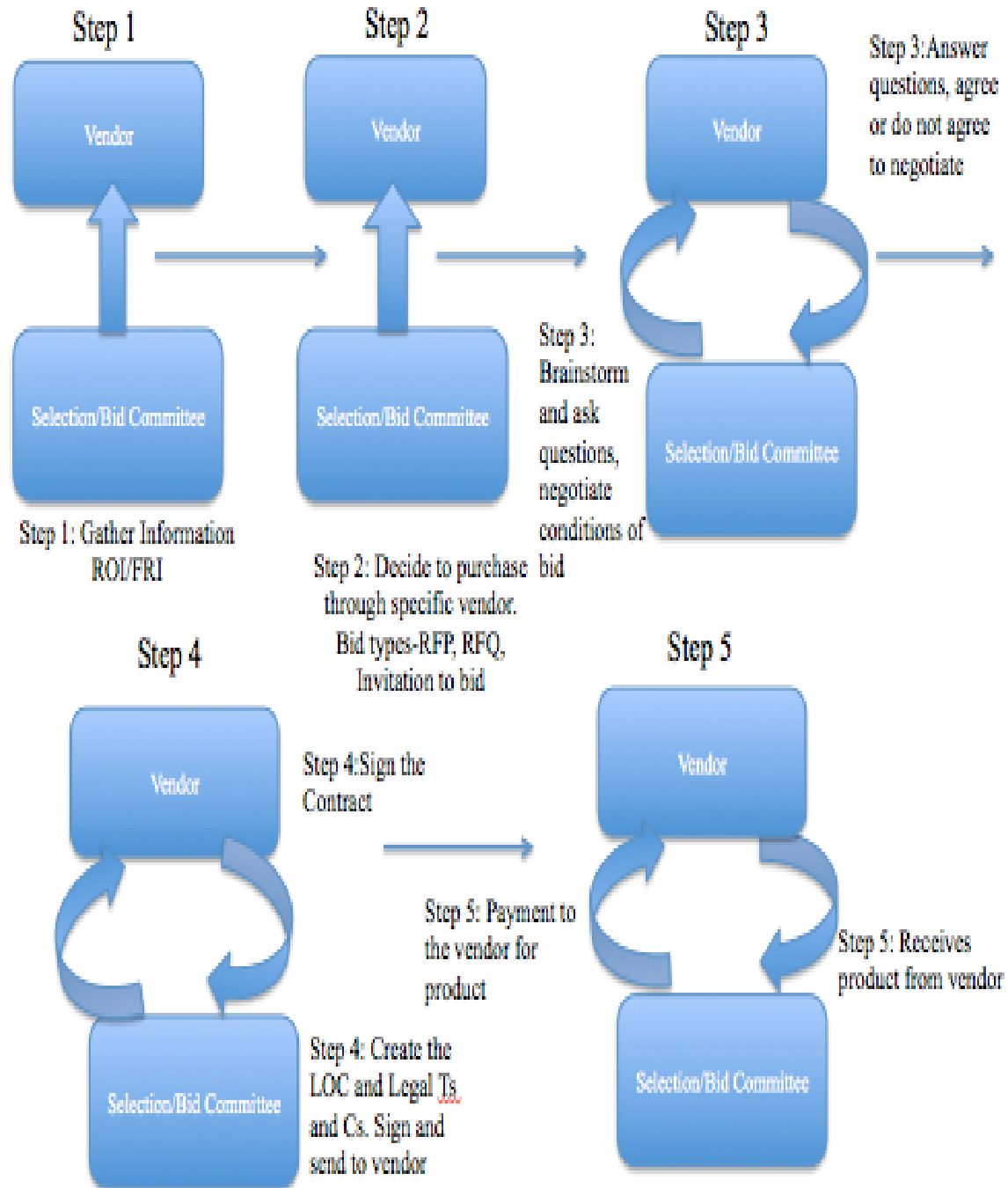


Figure 8

Entities that this hospital actually purchases from

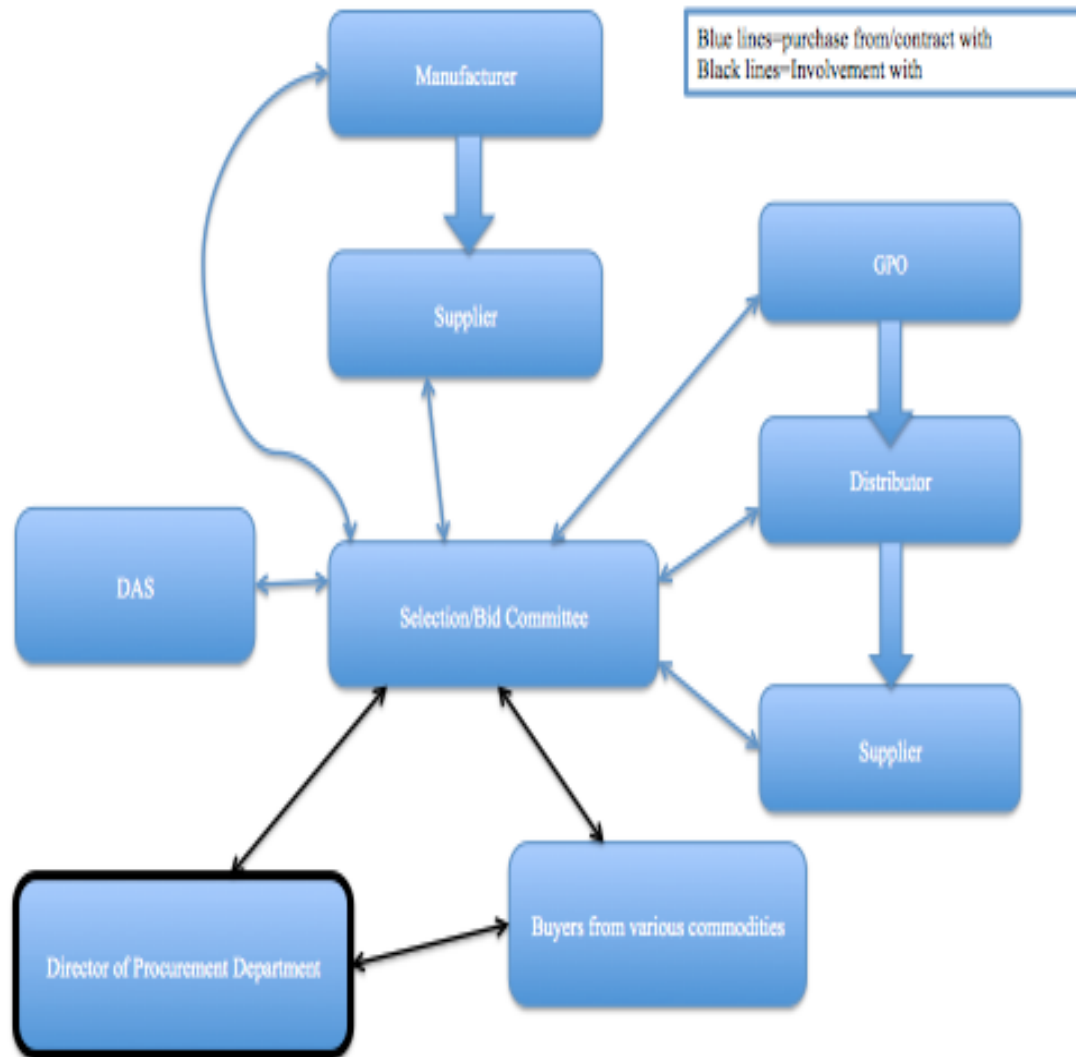


Figure 9

Stakeholder Involvement or Lack of Involvement in the purchasing decision process

Dashed lines indicate where the present interviews and literature review suggest that interactions would be beneficial.

